

Querying with QGreenland - Instructor Guide

Source: QGreenland

Activity Summary

These quick, one-page tutorials teach you how to analyze QGreenland datasets with beginner-level geoprocessing tools. Our tutorials walk you through the step-by-step process with easy-to-follow directions and screenshots.

Learning Goals and Outcomes

Students will explore the following questions...

- What is a good estimate of the volume of the Greenland ice sheet?
 - They will then calculate the volume of the Greenland Ice sheet.
- Which populated regions in Greenland have more than 5000 people?
 - They will then select populated places in Greenland with more than 5000 people.
- What is the total number of people in Greenland's populated areas? What is the average size of Greenland's populated areas?
 - They will then calculate the total population of Greenland's towns and settlements.

Context for Use

Topic	Geospatial technology
Course Type	Tutorial
Audience	Beginner QGIS users
Instructional Time	Each resource takes ~15-20 minutes
Context	These short, one-page tutorials are appropriate for beginner QGIS users. Users should have downloaded and opened both QGIS and the QGreenland project.
Materials	Computers that have QGIS and QGreenland installed. See requirements at www.qgis.org .
Materials Prep	Install software for QGIS or QGreenland on students own machines or a computer lab if available. Instructor should be familiar with how to complete the QGIS exercises in the lab.

Description and Materials



Each of the following is a separate 'Querying with QGreenland' exercise designed to introduce new QGIS users to the various capacities of the QGreenland GIS package.

What is a good estimate of the volume of the Greenland ice sheet?

- Students will learn how to find the volume or area of the Greenland ice sheet based on a map's dataset.

Which populated regions in Greenland have more than 5000 people?

- Students will learn how to isolate geographic regions in Greenland that meet a set attribute criteria.

What is the total number of people in Greenland's populated areas? What is the average size of Greenland's populated areas?

- Students will learn how to pull statistics from the population layer's dataset.

Teaching Notes and Tips

For more QGIS and QGreenland instruction and background see the [QGreenland Beginner's Tutorial Series](#).

This lesson aligns with the standard below:

- [Polar Literacy Principle 2A](#): Ice is dynamic and comes in many shapes and sizes—big, small, floating in water or layered on land, thin or thick, solid or porous, soft

Assessment

While no tailored assessments are designed for this lesson, consider using an exit ticket. See below for some resources on exit tickets:

- Center for Professional Education for Teachers (n. d.) *Exit Tickets as Formative Assessments*. Available at: <https://cpet.tc.columbia.edu/news-press/exit-tickets-as-formative-assessments> (Accessed: 3 September 2026).
- Center for Teaching Excellence (15 March 2024) *Exit Tickets*. Available at: <https://cteresources.bc.edu/documentation/exit-tickets/> (Accessed: 3 September 2026).

References and Resources

- Center for Professional Education for Teachers (n. d.) *Exit Tickets as Formative Assessments*. <https://cpet.tc.columbia.edu/news-press/exit-tickets-as-formative-assessments> (Accessed: 3 September 2026).
- Center for Teaching Excellence (15 March 2024) *Exit Tickets*. Available at: <https://cteresources.bc.edu/documentation/exit-tickets/> (Accessed: 3 September 2026).



- QGreenland (2022) *QGreenland Beginner's Tutorial Series*. Available at:
<https://www.youtube.com/playlist?list=PLSRiyMridUCwyu-vqpAFtm8bVERgTvs7q>
(Accessed: 3 September 2026).